Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of determining **[[the]]** a spacing between a ~~patterned~~ template and a substrate spaced-apart from the template, defining a region therebetween having an index of refraction associated therewith, the method comprising:

~~positioning the patterned template and the substrate in a spaced relationship to one another such that a gap is created between the patterned template and the substrate;~~

~~applying~~ impinging incident light ~~to the patterned template and the substrate, wherein the light comprises a plurality of wavelengths~~ upon the region by propagating the incident light along a path having a plurality of indices of refraction associated therewith, including the index of refraction, to form monitoring light; and

~~monitoring light reflected from a surface of the patterned template and the substrate;~~

determining ~~the distance between the surface of the patterned template and the substrate based on the monitored light~~, from the monitoring light, a measured dimension of the region by ascertaining a wavenumber associated with the monitoring light that is a function of a wavelength of the monitoring light and the index of refraction.

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2. (Currently Amended) The method of claim 1, further comprising determining an error signal, wherein the error signal corresponds to **[[the]]** a difference between a desired ~~distance between the surface of the patterned template and the substrate~~ dimension of the region and ~~the determined distance between the surface of the patterned template and the substrate~~ a measured dimension of the region.

3. (Currently Amended) The method of claim 1, further comprising determining an error signal, wherein the error signal corresponds to **[[the]]** a difference between a desired ~~distance between the surface of the patterned template and the substrate~~ dimension of the region and ~~the determined distance between the surface of the patterned template and the substrate~~ a measured dimension of the region; and sending the error signal to at least one actuator, wherein the at least one actuator is configured to adjust the ~~distance~~ spacing between the ~~surface of the patterned~~ template and the substrate in response to the difference.

4-7. CANCELLED

8. (Currently Amended) The method of claim 1, further comprising ~~determining the distance between the surface of the pattern template and the substrate~~ making plurality of dimensional measurements of the region at ~~a~~

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~~plurality of~~ differing locations and determining whether the ~~surface of the patterned~~ template and the substrate are substantially parallel based on the plurality of ~~distance determinations~~ dimensional measurements.

9. (Currently Amended) The method of claim 8, further comprising determining ~~an error signal, wherein the error signal corresponds to a relative movement between the surface of the patterned template and the substrate required to bring the surface of the patterned template and the substrate into a substantially parallel configuration~~ parallelism between the template and the substrate in response to the plurality of dimensional measurements.

10. (Currently Amended) The method of claim 8, further comprising ~~determining an error signal, wherein the error signal corresponds to a relative movement between the surface of the patterned template and the substrate required to bring the surface of the patterned template and the substrate into a substantially parallel configuration; and sending the error signal to at least one actuator, wherein the at least one actuator is configured to adjust the relative position of the surface of the patterned template and the substrate to achieve a substantially parallel configuration~~ dynamically adjusting an orientation between the template and the substrate to maintain parallelism therebetween.

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11. (Currently Amended) The method of claim 1, further comprising ~~determining the distance between the surface of the patterned template and the substrate~~ making a plurality of dimensional measurements of the region at 3 or more non-colinear locations and determining whether the ~~surface of the patterned~~ template and the substrate are substantially parallel based on the ~~3 or more distance determinations~~ plurality of dimensional measurements.

12. (Currently Amended) The method of claim 11, further comprising determining an error signal, wherein the error signal corresponds to a relative movement between the ~~surface of the patterned~~ template and the substrate required to bring the ~~surface of the patterned~~ template and the substrate into a substantially parallel configuration.

13. (Currently Amended) The method of claim 11, further comprising determining an error signal, wherein the error signal corresponds to a relative movement between the ~~surface of the patterned~~ template and the substrate required to bring the ~~surface of the patterned~~ template and the substrate into a substantially parallel configuration; and sending the error signal to at least one actuator, wherein the at least one actuator is configured to adjust the relative position of the ~~surface of the patterned~~ template and the substrate to achieve a substantially parallel configuration.

14-17. CANCELLED

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18. (Currently Amended) The method of claim 1, wherein ~~monitoring light reflected from the surface of the patterned template and the substrate~~ determining further comprises monitoring variations in an intensity of the monitored light across various wavelengths.

19. (Currently Amended) A method of determining **[[the]]** a spacing between a ~~substantially planar~~ template and a ~~patterned~~ substrate, the method comprising:

positioning the ~~substantially planar~~ template in a spaced relationship with respect to **[[and]]** the ~~patterned~~ substrate ~~in a spaced relationship to one another such that~~ defining a gap ~~is created between the substantially planar template and the substrate,~~ therebetween, with a material being disposed in the gap and having an index of refraction associated therewith;

applying incident light to the ~~substantially planar~~ template and the ~~patterned~~ substrate~~, wherein the light comprises a plurality of wavelengths~~;

monitoring light ~~reflected from a surface of~~ reaching an interface of the template with the material ~~the substantially planar template and the patterned substrate~~, defining monitored light; and

determining a magnitude of the ~~distance~~ spacing between the ~~substantially planar~~ template and the ~~patterned~~ substrate based on the monitored light by obtaining data representative of optical properties of the monitored light, with the magnitude being a function of optical

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characteristics of the material and a wavelength of the monitored light.

20. (Currently Amended) The method of claim 19, further comprising determining an error signal, wherein the error signal corresponds to **[[the]]** a difference between a desired distance between the ~~surface of the substantially planar~~ template and the ~~patterned~~ substrate and the ~~determined distance~~ spacing between the ~~surface of the substantially planar~~ template and the ~~patterned~~ substrate.

21. (Currently Amended) The method of claim 19, further comprising determining an error signal, wherein the error signal corresponds to **[[the]]** a difference between a desired distance between the ~~surface of the substantially planar~~ template and the ~~patterned~~ substrate and the ~~determined distance~~ spacing between the ~~surface of the substantially planar~~ template and the ~~patterned~~ substrate; and sending the error signal to at least one actuator, wherein the at least one actuator is configured to adjust the ~~distance~~ spacing between the ~~surface of the substantially planar~~ template and the ~~patterned~~ substrate.

22-25. CANCELLED

26. (Currently Amended) The method of claim 19, further comprising determining the ~~distance~~ spacing between the ~~surface of the substantially planar~~ template and the ~~patterned~~ substrate at a plurality of locations and

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determining whether the ~~surface of the substantially planar~~ template and ~~patterned~~ the substrate are substantially parallel based on the plurality of ~~distance~~ spacing determinations.

27. (Currently Amended) The method of claim 26, further comprising determining an error signal, wherein the error signal corresponds to a relative movement between the ~~surface of the substantially planar~~ template and the ~~patterned~~ substrate required to bring the ~~surface of the substantially planar~~ template and the ~~patterned~~ substrate into a substantially parallel configuration.

28. (Currently Amended) The method of claim 26, further comprising determining an error signal, wherein the error signal corresponds to a relative movement between the ~~surface of the substantially planar~~ template and the ~~patterned~~ substrate required to bring the ~~surface of the substantially planar~~ template and the ~~patterned~~ substrate into a substantially parallel configuration; and sending the error signal to at least one actuator, wherein the at least one actuator is configured to adjust the relative position of the ~~surface of the substantially planar~~ template and the ~~patterned~~ substrate to achieve a substantially parallel configuration.

29. (Currently Amended) The method of claim 19, further comprising determining the ~~distance~~ spacing between the ~~surface of the substantially planar~~ template and the

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~~patterned~~ substrate at 3 or more non-colinear locations and determining whether the ~~surface of the substantially planar~~ template and ~~patterned~~ the substrate are substantially parallel based on the 3 or more ~~distance~~ spacing determinations.

30. (Currently Amended) The method of claim 29, further comprising determining an error signal, wherein the error signal corresponds to a relative movement between the ~~surface of the substantially planar~~ template and the ~~patterned~~ substrate required to bring the ~~surface of the substantially planar~~ template and the ~~patterned~~ substrate into a substantially parallel configuration.

31. (Currently Amended) The method of claim 29, further comprising determining an error signal, wherein the error signal corresponds to a relative movement between the ~~surface of the substantially planar~~ template and the ~~patterned~~ substrate required to bring the ~~surface of the substantially planar~~ template and the ~~patterned~~ substrate into a substantially parallel configuration; and sending the error signal to at least one actuator, wherein the at least one actuator is configured to adjust the relative position of the ~~surface of the substantially planar~~ template and the ~~patterned~~ substrate to achieve a substantially parallel configuration.

32-35. CANCELLED

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36. (Currently Amended) The method of claim 19, wherein monitoring light reflected from the ~~surface of the substantially planar~~ template and the ~~patterned~~ substrate further comprises monitoring variations in intensity of the monitored light across various wavelengths.

37-245. CANCELLED

246. (Currently Amended) A method of determining a spacing between **[[the]]** a template and **[[the]]** a substrate, with a material being disposed between the template and the substrate, the method comprising:

positioning the template in a spaced relationship with respect to ~~and~~ the substrate ~~in a spaced relationship to one another such that~~ defining a gap ~~is created between the template and the substrate~~ therebetween, with said material being disposed in said gap and having an index of refraction associated therewith;

applying light to the template and the substrate, wherein the light comprises a plurality of wavelengths;

monitoring light reflected from a surface of the template and the substrate defining monitored light; and

determining a magnitude of the spacing between the template and the substrate based on the monitored light by obtaining data representative of **[[the]]** an intensity of at least some of the wavelengths associated with the monitored light and determining a wavenumber associated therewith, wherein the wavenumber is a function of the ~~refractive~~ index of ~~the refractive light~~ refraction and the wavelength

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of the ~~refractive~~ monitored light, with said magnitude being a function of the wavenumber.

247. (Previously Presented) The method of claim 246, further comprising determining an error signal, wherein the error signal corresponds to the difference between a desired distance between the template and the substrate and the magnitude.

248. (Currently Amended) The method of claim 246, further comprising determining an error signal, wherein the error signal corresponds to the difference between a desired distance between the template and the substrate and the magnitude; and sending the error signal to at least one actuator, wherein the at least one actuator is configured to adjust the ~~distance~~ spacing between the surface of the template and the substrate.

249. (Currently Amended) The method of claim 246, wherein the template comprises a plurality of recesses defined on a surface ~~of the template~~ thereof.

250. (Currently Amended) The method of claim 246, wherein the template comprises a plurality of recesses defined on a surface ~~of the template~~ thereof, wherein the recesses are of a known depth.

251. (Currently Amended) The method of claim 246, wherein the template comprises a plurality **[[or]]** of

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recesses defined on a surface ~~of the template~~ thereof and wherein applying light to the template and the substrate comprises passing the light through one or more of the recesses.

252. (Currently Amended) The method of claim 246, wherein the template comprises a plurality **[[or]]** of recesses defined on a surface ~~of the template~~ thereof and wherein **[[the]]** a depth of each recess is at least ¼ of **[[the]]** a mean wavelength of the light applied to the template and the substrate.

253. (Currently Amended) The method of claim 246, further comprising determining the distance between the template and the substrate at a plurality of locations and determining whether the template and the substrate are substantially parallel based on the plurality of distance determinations.

254. (Previously Presented) The method of claim 253, further comprising determining an error signal, wherein the error signal corresponds to a relative movement between the template and the substrate required to bring the template and the substrate in to a substantially parallel configuration.

255. (Currently Amended) The method of claim 253, further comprising determining an error signal, wherein the error signal corresponds to a relative movement between the

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template and the substrate required to bring the template and the substrate in to a substantially parallel configuration; and sending the error signal to at least one actuator, wherein the at least one actuator is configured to adjust the relative position ~~of~~ between the template and the substrate to achieve a substantially parallel configuration.

256. (Previously Presented) The method of claim 246, wherein the template is a patterned template.

257. (New) The method as recited in claim 1, wherein the incident light comprises a plurality of wavelengths.

258. (New) The method as recited in claim 257, wherein determining further includes obtaining data representative of an intensity of at least some of the wavelengths associated with the monitoring light.

259. (New) The method as recited in claim 1, wherein the monitoring light comprises reflected light.

260. (New) The method as recited in claim 1, wherein the region comprises a material, with the material having said index of refraction.

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261. (New) The method as recited in claim 1, wherein the region comprises a material, with the material substantially filling the region.

262. (New) The method as recited in claim 1, wherein determining further includes ascertaining the dimension of the region be a function of an intensity of the monitoring light.

263. (New) The method as recited in claim 1, wherein the template is a patterned template.

264. (New) The method as recited in claim 1, wherein the template is a substantially planar template.

265. (New) The method as recited in claim 1, wherein the optical characteristics include an intensity of the monitoring light.

266. (New) The method as recited in claim 19, wherein the incident light comprises a plurality of wavelengths.

267. (New) The method as recited in claim 266, wherein determining the magnitude further includes obtaining data representative of an intensity of at least some of the wavelengths associated with the monitored light.

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268. (New) The method as recited in claim 19, wherein the monitored light comprises reflected light.

269. (New) The method as recited in claim 19, wherein the index of refraction and the wavelength of the monitored light define a wavenumber, with the magnitude further being a function of the optical properties of the monitored light corresponding to the wavenumber.

270. (New) The method as recited in claim 19, wherein the optical characteristics of the material include the index of refraction.

271. (New) The method as recited in claim 19, wherein the material substantially fills the gap.

272. (New) The method as recited in claim 19, wherein the template is a patterned template.

273. (New) The method as recited in claim 19, wherein the template is a substantially planar template.

274. (New) The method as recited in claim 19, wherein the optical properties of the monitored light include an intensity of the monitored light.

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